

EXHIBIT "C"

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

James C. Powers

Serial No.: 10/671,360

Filed: September 25, 2003

Confirmation No.: 7114

Group Art Unit: 1654

Examiner: Christina Bradley

Docket No.: 820701-1015

For: Ketoamide Inhibitors in Chronic Nerve Disease

DECLARATION OF RAYMOND T. BARTUS PURSUANT TO 37 C.F.R. §1.132

Commissioner for Patents
Alexandria, Virginia 22313-1450

Sir,

I, **Raymond T. Bartus**, hereby declare that:

Education and Experience

1. I am currently employed as Senior Vice President of Clinical and Preclinical R&D and as Chief Operating Officer of Ceregene Inc.

2. I graduated from California University of Pennsylvania with a Bachelor of Arts in Biopsychology (1968) and from North Carolina State University with a Masters of Science in Experimental Psychology (1970) and a Ph.D. in Physiological Psychology with an emphasis in Neuroscience (1972). I have also had extensive postgraduate training, including post-doctoral training in neuroscience at the United States Naval Medical Research Lab, with an emphasis on electrophysiology and innovative animal neurosurgical techniques. I also served a postdoctoral fellowship at NASA (1970-72) and the National Research Council (1972-73).

3. I am an inventor or co-inventor on 5 patents and 5 patent applications currently pending, including U.S. Pat. No. 5,444,042 directed to the use of calpain inhibitors in the treatment of neurodegeneration resulting from ischemia.

4. Since graduating with my Ph.D., I have been involved in a variety of pursuits related to the field of neuroscience, particularly neurodegenerative diseases, including a focus on transnational research from animal models to human trials. I have also gained extensive experience in the field of drug testing and development. In addition to the postgraduate training mentioned above, I have held research and upper-level management positions at several scientific companies. As a Senior Scientist of CNS Pharmacology for Warner-Lambert/Parke-Davis Research Labs (now part of Pfizer, Inc.), I successfully identified 3 lead compounds selected for clinical development, which eventually produced the first-ever FDA-approved product for Alzheimer's disease, and I established the first colony of aged monkeys to model neurodegenerative diseases. I served as Senior Scientist, Group Leader of Functional Neuroscience and Founding Director of the Geriatric Research Program at American Cyanamid Company where I established and directed the Geriatric Research, Drug Discovery and Development Program, which was involved in the screening and identification of compounds for clinical development, some of which eventually led to marketed or marketable drugs. At Cortex Pharmaceuticals, where I served as Chief Scientific Officer, Executive Vice President, and Chief Operating Officer, I established several novel therapeutic programs including a calpain inhibitor program for the treatment of acute neurodegeneration, which included the testing of AK295. I also served as Senior Vice President of Neurobiology and Preclinical Research and Development at Alkermes, Inc., where I managed and directed all preclinical and life sciences research and development, including the conception, initiation and development of the company's first proprietary product,

Vivitrol™, for which FDA approval was granted in 2006. Since, 2002, I have been employed at Ceregene, where the primary focus is on the development of gene therapy to deliver neural growth factors for the treatment of neurodegenerative diseases. In addition to my roles as Senior Vice President of Clinical and Preclinical R&D and Chief Operating Officer, I also chair the Ceregene Scientific Advisory Board. I have held or currently hold memberships with several academic/scientific foundations and societies including the Society for Neuroscience, the American College of Neuropsychopharmacology, and the American Society for Pharmacology and Experimental Therapeutics, among others. I was the founder and Editor-in-Chief of the scientific journal *Neurobiology of Aging*, where I currently serve as a section editor. I have also served as an editor or an editorial board member for scientific journals including, *Brain Research*, *Brain Dysfunction*, *Pharmacology*, *Biochemistry and Behavior*, and *Experimental Neurology*, among others. I have also served on various scientific and government advisory boards and councils including the NIDA Special Workgroup on Strategic Planning for Medications Development (2000) and the advisory panel for the U.S. Congress, Office of Technology Assessment for "Impact of Neuroscience" (1983). In addition, I have served as advisor or review committee member for the National Science Foundation, the National Research Council, and the National Institute of Neurologic and Communicative Diseases, among others. I have published over 180 articles in scientific journals or review articles. I also serve as an Adjunct Professor in the Department of Pharmacology for Tufts University Medical Center and in the Department of Psychiatry for New York University Medical Center.

5. Through my education, research, and work experience related to neurological disorders and drug discovery and development, I have gained extensive

experience in the field of drug therapies for neurological disorders (including neurodegenerative disorders), including the testing of AK295 in particular.

Discussion

6. During my tenure at Cortex Pharmaceuticals from 1988-1992, I established a therapeutic program aimed at identifying and testing calpain inhibitors for the treatment of acute neurodegeneration. During this time, we identified the compound Z-Leu-Abu-(CH₂)₃-4-morpholinyl (AK295) as a lead compound for the treatment of neurodegeneration associated with stroke and ischemia. Approximately between the years 1990 and 1995, we tested AK295 for effects in models of stroke, closed head injuries, and post-surgical brain trauma.


7. Unfortunately, after extensive testing, we abandoned AK295 as a viable therapeutic candidate for the treatment of neurodegeneration due to insufficient bioavailability. Specifically, based on my testing, I felt that the chemical nature of AK295 made it unlikely to penetrate the nervous system at meaningful levels when given peripherally. Therefore, I did not believe that it was a viable candidate for the treatment of neurological conditions.

8. Sometime in the year 2001 or early 2002, I had a telephone conversation with Dr. Jonathan Glass, in which we discussed his and Dr. Powers' plans to test AK295 for the treatment of axonal degeneration associated with peripheral neuropathy. Based on my experience with the use of AK295 for the treatment of neurological conditions, I did not believe that they would have any meaningful success with AK295 for the treatment of peripheral neuropathy. I expressed this opinion to Dr. Glass, explaining that I did not believe AK295 would be orally active and that, given peripherally by other normal modes of delivery, it would not have sufficient bioavailability in the nervous system to have a significant effect on a condition such as peripheral neuropathy.

9. In view of the foregoing and my extensive experience with AK295, I doubted that Drs. Glass and Powers would have success with the *in vivo* use of AK295 for the treatment of peripheral neuropathy in animals.

DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements, and the like, so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



Raymond T. Bartus, Ph.D.

12-21-06

Date